

PROJECT NOTE

SDMS DocID 584900

TO: Project File

SUBJECT: Jard Company, Inc.

TASK DESCRIPTION: Total Population and Private Well Population Calculations Within 4 Radial Miles of Jard Company Inc.

TDD NO.: 12-10-0008

W.O. NO.: 20114-081-998-0850

TASK NO.: 40

DATE: 9 May 2013

PREPARED BY: Gerald Hornok

The U.S. Environmental Protection Agency (EPA) New England Geographic Information System (GIS) Center provided Weston Solutions, Inc., Superfund Technical Assessment and Response Team II (START) with the following three maps for the Jard Company, Inc. site.

- 1.) Population by Radius (1990 U.S. Census) within 4 Radial Miles of the Jard Company, Inc. (See Attachment A)
- 2.) Population by Radius on Private Wells (1990 U.S. Census) within 4 Radial Miles of the Jard Company, Inc. (See Attachment B)
- 3.) Population by Radius (2010 U.S. Census) within 4 Radial Miles of the Jard Company, Inc. (See Attachment C)

The EPA GIS Center calculated the population data by using shapefiles of the population block group data from the respective census and overlaying that onto a basemap which contained the site boundary and associated radial rings around the boundary (*i.e.* site boundary to ¼ mile, ¼ mile to ½ mile, ½ mile to 1 mile, 1 mile to 2 mile, 2 mile to 3 mile, and 3 mile to 4 mile). For block groups that overlapped radial rings the EPA GIS Center calculated the percentage of the block group which fell within each of the radial rings which translated to the population within that block group which fell within each of the radial rings.

As part of the 1990 U.S. Census, the source of water was presented as part of the questionnaire. This information, which was grouped by the U.S. Census Bureau into block groups, was used to determine the number of people within radial rings of a site who relied on private drinking water wells as their source of drinking water. The 2010 U.S. Census questionnaire did not present the source of water question; therefore, START will utilize the information provided by the three EPA GIS Center maps to determine the approximate population currently served by private drinking water wells.

START analyzed the data from the Population by Radius (1990 U.S. Census) within 4 Radial Miles of the Jard Company, Inc. Property Map and the Population by Radius (2010 U.S. Census) within 4 Radial Miles of the Jard Company, Inc. Property Map. START calculated the percentage change in

total population for the entire four mile radius (*i.e.* percentage change was not calculated for each individual radial ring). Once the percentage change in total population was calculated, START applied that percentage change to the population utilizing private drinking water wells for their drinking water.

The percentage change for the population served by private drinking water wells within 4 radial miles of the Jard Company, Inc. Property were calculated as follows:

Total Population Within 4 Radial Miles (1990 U.S. Census): 16,984

Total Population Within 4 Radial Miles (2010 U.S. Census): 16,343

16,343 (2010 U.S. Census) divided by 16,984 (1990 U.S. Census) minus 1.00 times 100 = -0.0377 (approximately -3.77 %)

Therefore, the population decreased approximately 3.77 % from the 1990 U.S. Census to the 2010 U.S. Census. START used this 3.77 % decrease in population to calculate the current population served by private drinking water wells. START calculated the population served by private drinking water wells as follows:

Site Boundary to ¼ mile radius: 39 (1990 U.S. Census) times 3.77% (percentage decrease) = 37

¼ mile radius to ½ mile radius: 53 (1990 U.S. Census) times 3.77% (percentage decrease) = 51

½ mile radius to 1 mile radius: 168 (1990 U.S. Census) times 3.77% (percentage decrease) = 162

1 mile radius to 2 mile radius: 1,069 (1990 U.S. Census) times 3.77% (percentage decrease) = 1,029

2 mile radius to 3 mile radius: 672 (1990 U.S. Census) times 3.77% (percentage decrease) = 647

3 mile radius to 4 mile radius: 957 (1990 U.S. Census) times 3.77% (percentage decrease) = 921

The estimated 2010 population served by private drinking water wells within 4 radial miles of the Jard Company, Inc. property is as follows:

Site Boundary to ¼ mile radius: 37

¼ mile radius to ½ mile radius: 51

½ mile radius to 1 mile radius: 162

1 mile radius to 2 mile radius: 1,029

2 mile radius to 3 mile radius: 647

3 mile radius to 4 mile radius: 921



Superfund Technical Assessment and Response Team III (START)

Attachment A

Population by Radius (1990 U.S. Census)
within 4 Radial Miles of the Jard Company, Inc. Property

Population by Radius

(1990 Census)

3 - 4 Miles: 2846
2 - 3 Miles: 2143
1 - 2 Miles: 5752
1/2 - 1 Mile: 4647
1/4 - 1/2 Mile: 1302
0 - 1/4 Mile: 294

Jard Company Site

Bennington, VT

42°53'20.1" N, -73°11'22.5" W

1990 Population

Legend:

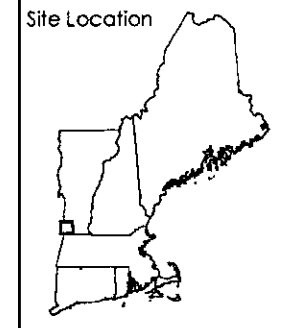
- Site Location
- School
- Town Boundary
- Stream or Water Body
- Wetland

People Per Square Mile (1990)*

- 0
- 1 - 100
- 101 - 1000
- 1001 - 2500
- 2501 - 5000
- > 5000

*Estimated by US Census Bureau

Site Location

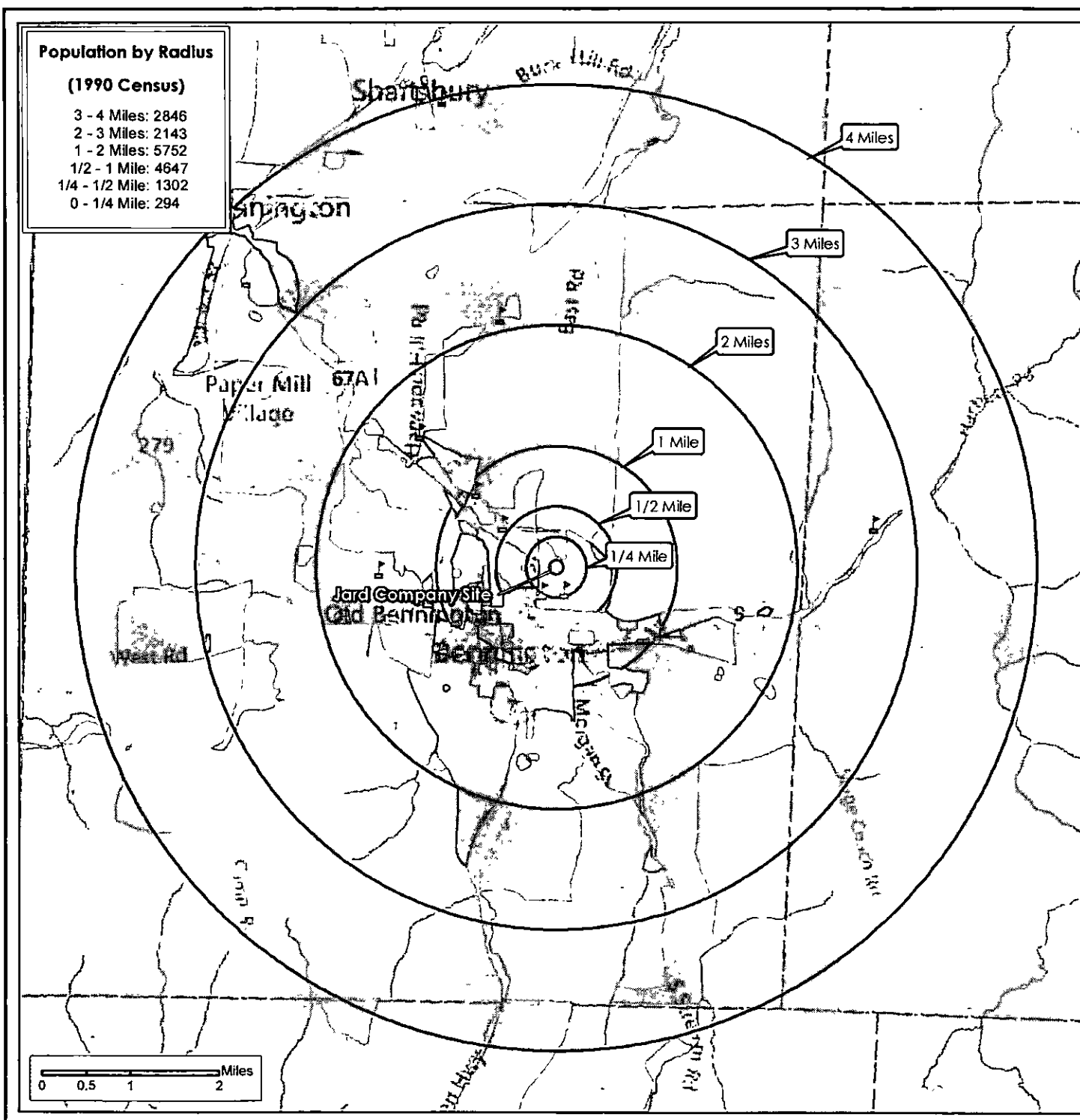


Data Sources: U.S. Census Bureau, EPA, NavTeq, NHD, Bing
Created by EPA New England GIS Center
MapTracker ID: 8941\J
12/3/2012

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0 0.5 1 2 Miles





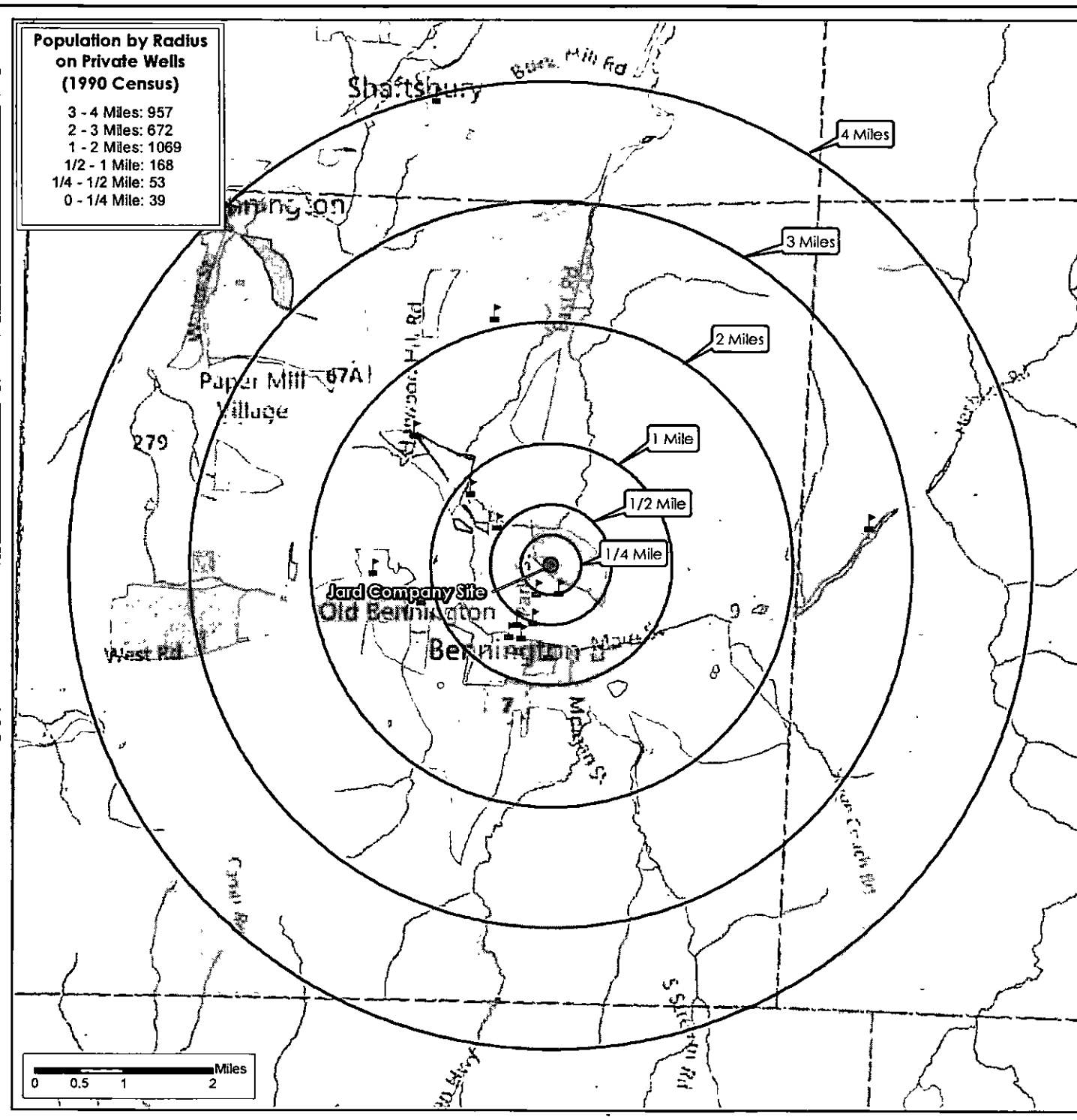
Superfund Technical Assessment and Response Team III (START)

Attachment B

**Population by Radius on Private Wells (1990 U.S. Census)
within 4 Radial Miles of the Jard Company, Inc. Property**

**Population by Radius
on Private Wells
(1990 Census)**

3 - 4 Miles: 957
2 - 3 Miles: 672
1 - 2 Miles: 1069
1/2 - 1 Mile: 168
1/4 - 1/2 Mile: 53
0 - 1/4 Mile: 39



Jard Company Site

Bennington, VT

42°53'20.1" N, -73°11'22.5" W

**1990 Population
on Private Wells**

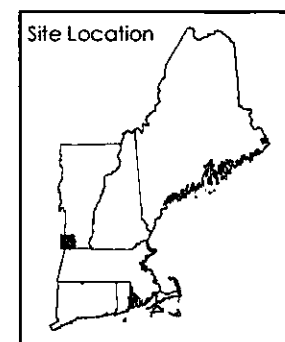
Legend:

- Site Location
- ▤ School
- ▭ Town Boundary
- ~ Stream or Water Body
- Wetland

Population on Private Wells (1990)*

- 0
- 1 - 10
- 11 - 100
- 101 - 1000
- > 1000

*Estimated by US Census Bureau





Superfund Technical Assessment and Response Team III (START)

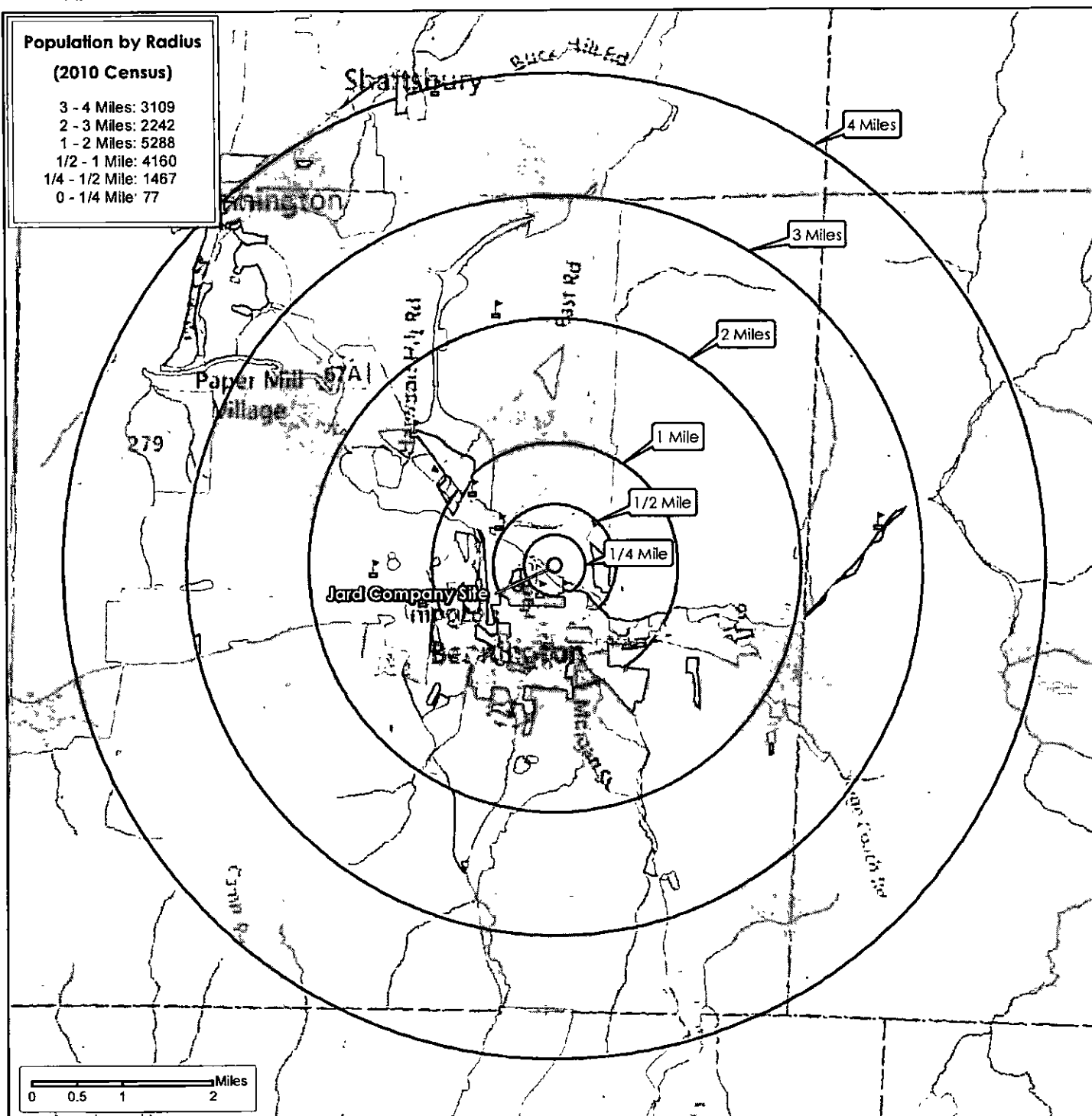
Attachment C

Population by Radius (2010 U.S. Census)
within 4 Radial Miles of the Jard Company, Inc. Property

Population by Radius

(2010 Census)

3 - 4 Miles: 3109
2 - 3 Miles: 2242
1 - 2 Miles: 5288
1/2 - 1 Mile: 4160
1/4 - 1/2 Mile: 1467
0 - 1/4 Mile: 77



Jard Company Site

Bennington, VT

42°53'20.1" N, -73°11'22.5" W

2010 Population

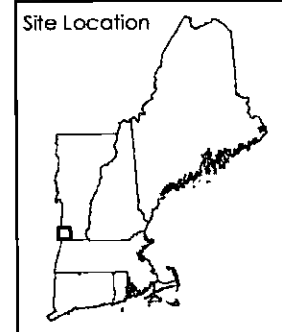
Legend:

- Site Location
- School
- Town Boundary
- Stream or Water Body
- Wetland

People Per Square Mile (2010)*

- 0
- 1 - 100
- 101 - 1000
- 1001 - 2500
- 2501 - 5000
- > 5000

*Estimated by US Census Bureau



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